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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/733,292	12/12/2003	Geoffrey H. White	EDWA0018U-US	2518	
31518	7590 09/21/2006		EXAMINER		
NEIFELD IP LAW, PC			THALER, MICHAEL H		
4813-B EISENHOWER AVENUE ALEXANDRIA, VA 22304		•	ART UNIT	PAPER NUMBER	
	•		3731		
			DATE MAILED: 09/21/2000	DATE MAILED: 09/21/2006	

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# BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/733,292 Filing Date: December 12, 2003 Appellant(s): WHITE ET AL.

MAILED SEP 2 1 2006 GROUP 3700

Richard A. Neifeld For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed Nov. 22, 2005 appealing from the Office action mailed August 23, 2005.

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# (1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

# (2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

#### (3) Status of Claims

The statement of the status of claims contained in the brief is correct.

#### (4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

#### (5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

#### (6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

# (7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

#### (8) Evidence Relied Upon

5,489,295	PIPLANI ET AL.	2-1996
4,617,932	KORNBERG	10-1986
5,665,115	CRAGG	9-1997
5,275,622	LAZARUS ET AL.	1-1994

#### (9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 12-16, 19, 20 and 25-36 stand rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Piplani et al. (5,489,295). As to claims 12 and 20, Piplani et al., in figure 4, disclose prosthesis 20 wherein at least one of the first and second ends is provided with a wire structure (126 or 127) which has a plurality of apices (e.g. 132 or the portions of wire structure 126 which extend beyond the end of prosthesis 20) extending beyond at least a portion of the corresponding end. The apices are inherently capable of being located across a lumen of a second vessel. For example, viewing figure 19, if the prosthesis 20 is inserted into a patient who has arteries (shown

in figure 19 extending laterally near the top of the figure) which are closer to the aortic bifurcation 221 than the example shown in figure 19, then the apices 132 on wire structure 126 would be located across the lumen of each of the laterally extending arteries. As another example, if the prosthesis 20 is inserted into the same patient shown the Piplani et al. drawings, but is deployed in a position slightly above that shown in figure 19, the apices 132 on wire structure 126 would be located across the lumen of each of the laterally extending The prosthesis 20 is inherently capable of being deployed in this location. Alternatively, it would have been obvious that the apices are capable of being located across a lumen of a second vessel for this reason. As to claims 25-30, wire structure (126 or 127) has a shape that is clearly generally sinusoidal or zig-zag even though it is not a perfect sine wave. As to claims 31-36, Piplani et al. disclose first and second wires (the lengths of platinum wires described in col. 5, lines 23-27).

Claims 17 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Piplani et al. (5,489,295) in view of Kornberg (4,617,932). Piplani et al. fail to disclose stainless steel or plastic as the material for the wire structure. However, it is old and well known to use these materials in

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order to obtain the advantage of making the device biocompatible as well as strong. For example, Kornberg teaches that such materials may be used for the wire structures 16 and (14, 15) in an aortic graft for these reasons (col. 4, lines 8-17, 25-29 and 48-49). It would have been obvious to use either of these materials for the Piplani et al. wire structures so that it too would have these advantages.

21-36 stand rejected under 35 U.S.C. 102(e) anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cragg (5,665,115). Cragg discloses a prosthesis (figures 7-9) wherein at least one of the first and second ends is provided with a wire structure 11 which has a plurality of apices extending beyond at least a portion of the corresponding end (in the embodiment in which the graft 13 is shorter than the wire helix as described in col. 3, lines 29-31), wherein the formed from malleable material that are substantially resilient (col. 4, lines 24-26). The apices are inherently capable of being located across a lumen of a second vessel since the prosthesis can be deployed in the first blood vessel to a position adjacent the intersection point of a second blood vessel such that the apices are located across a lumen of the second vessel. Alternatively, it would have been obvious that the apices are capable of being located across a lumen of a

second vessel for this reason. As to claims 31-36, Cragg discloses first and second wires (the wire loops 12 on wire body 11 which are located near the middle of the prosthesis, noting that the loops 12 are wire since they can be formed of metal as indicated in col. 3, lines 4-7).

# (10) Response to Argument

Initially, it is noted that the claims are drawn to a prosthesis for placement in a vessel in a certain location (noting the preamble "for placement in a lumen of the first vessel that intersects with a second vessel" as recited in claims 12 and 20, lines 1-2). Thus, the claims are not drawn to a method of placing the prosthesis in a vessel in a certain location. Nor are the claims drawn to a combination of a prosthesis and first and second vessels of a patient. It has been demonstrated that the Piplani et al. prosthesis is inherently capable of being placed in a vessel in the claimed location.

In response to the argument on pages 9-10 of the brief, although the Piplani et al. indicates that the <u>graft</u> should not be located past the renal arteries since such a placement would occlude the renal arteries (col. 11, lines 44-48), Piplani et al. does <u>not</u> indicate that the <u>wires structure</u> (126) should not be so located. In any event, it is not the examiner's position

that it would have been obvious to so locate the Piplani et al. prosthesis. Rather, it is the examiner's position that the Piplani et al. prosthesis, with no structural modification, is inherently capable of being located as claimed as further explained below.

apices of applicant's invention are apparently considered to be the entire portions of the wire structure 17 that extend beyond the end of the graft rather than the extreme peaks of the wire (since they are defined as extending across a lumen of the second vessel). Similarly, the apices of the Piplani et al. wire structure 126 may be considered to be the entire portions of the wire 126 that extend beyond the end of the graft. Note that the diameter of the Piplani et al. wire structure 126 is a relatively small 0.254 to 0.381 mm (Note col. 5, lines 35-58 which indicates that the wire structure 126 is constructed in a manner similar to that as described in U.S. Patent 5,275,622 which, in turn, discloses in col. 9, lines 28-34 a wire diameter of 0.01 to 0.015 inches which is 0.254 to 0.381 mm.) while the diameter of the wire structure 17 of appellant's invention is a relatively large 0.3 to 0.4 mm (page 9, lines 22-23 of appellant's specification). Thus, the Piplani et al. wire structure 126 is inherently sufficiently small in diameter so as not to occlude the lumen of the second vessel, as

claimed, since it is at least as small in diameter as the wire structure of appellant's invention. Further, the Piplani et al. wire structure 126 extends beyond the end of the graft by a relative large distance of 1 cm (i.e. the distance between planes 141 and 142 as indicated in col. 9, lines 39-46 of U.S. Patent 5,275,622) while the wire structure 17 of appellant's invention extends beyond the end of the graft a relatively small distance of less than 6mm (noting that the entire amplitude of the wire is about 6mm as indicated on page 10, lines 2-6 of appellant's specification). Thus, the Piplani et al. wire structure 126 inherently extends sufficiently far beyond the end of the graft to extend completely across a lumen of the second vessel, as claimed, since it extends farther beyond the end of the graft than appellant's invention.

Appellant argues on page 10 of the brief that the Piplani wire, if located as the examiner proposes, would result in some hooks not pressing against tissue. This argument is incorrect since the Piplani hooks would press against the tissue on the first vessel which is just beyond its intersection with the second vessel.

Appellant argues on pages 11-12 of the brief that the wire structure 126 of Piplani et al. is not generally sinusoidal or generally zig-zag shaped. This argument is incorrect. The

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structure shown in figure 8 of Piplani et al. has the same basic shape as wire structure 126 (col. 7, lines 25-28). This structure is clearly generally zig-zag shaped since it undulates up and down along its circumference. The coils 203 and hooks 211 take up only a small portion of the structure and thus do not prevent the structure from being generally zig-zag shaped. Similarly, the structure is clearly generally sinusoidal since, like a sine wave, it even has rounded curves (at 203) at the apices of the wave shape.

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Appellant alleges on page 12 of the brief that the examiner fails to assert that Piplani discloses any additional wires not at an end of the prosthesis, as defined by claims 31-36. This allegation is incorrect since the final rejection clearly refers to additional wires (the lengths of platinum wires described in col. 5, lines 23-27 of Piplani).

#### (11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer. Application/Control Number: 10/733,292 Page 10

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Michael Thaler

Conferees:

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